## (19) World Intellectual Property Organization

International Bureau



## 

(43) International Publication Date 3 February 2005 (03.02.2005)

PCT

## (10) International Publication Number WO 2005/009451 A1

(51) International Patent Classification7: 35/74, 31/43, 31/424, A61P 31/00

A61K 35/76,

(21) International Application Number:

PCT/GB2004/003237

(22) International Filing Date:

23 July 2004 (23.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

23 July 2003 (23.07.2003) GB

0317240.0 0410855.1

14 May 2004 (14.05.2004) GB

- (71) Applicant (for all designated States except US): BIO-CONTROL LIMITED [GB/GB]; Cranfield Innovation Centre, University Way, Cranfield Technology Park, Cranfield, Bedfordshire MK43 0BT (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SOOTHILL, James [GB/GB]; Department of Medical Microbiology, CB Labs Level 4, Great Ormond Street Hospital, Great Ormond Street, London WC1N 3JH (GB). HAWKINS, Catherine [GB/GB]; Department of Medical Microbiology, CB Labs Level 4, Great Ormond Street Hospital, Great Ormond Street, London WC1N 3JH (GB). HARPER, David [GB/GB]; Biocontrol Limited, Cranfield Innovation Centre, University Way, Cranfield Technology Park, Cranfield, Bedfordshire MK43 0BT (GB).

- (74) Agent: IRVINE, Jonquil, Claire; Marks & Clerk, 4220 Nash Court, Oxford Business Park South, Oxford OX4 2RUJ (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: BACTERIOPHAGE-CONTAINING THERAPEUTIC AGENTS

(57) Abstract: The present invention relates in its broadest aspect to combined phage/antibiotic therapy. More particularly, it relates to use of (i) one or more bacteriophages and (ii) one or more antibiotics in the manufacture of a combined product for simultaneous, separate or sequential administration of (i) and (ii) to treat a bacterial infection characterized by biofilm formation, for example an infection comprising or consisting of P. aeruginosa. Treatment in this context may be either therapeutic or prophylactic treatment. Also provided are deposited bacteriophages each exhibiting different strain specificity against P. aeruginosa and combinations of such bacteriophages, e.g. a panel of six deposited bacteriophages which was found to be effective against a high percentage of clinical isolates of P. aeruginosa from canine ear infections.

